

Kennedy Space Center (KSC) Environmental Policy For Reclamation and Salvage Activities

This Policy sets forth the Center's Environmental Policy regarding reclamation, salvage, and/or resale of Center materials through the KSC Reutilization, Recycling, Marketing Facility (RRMF). Categories of materials covered by this Policy include, but are not limited to, oil-filled equipment, lead acid batteries, scrap metal, electronic equipment, heavy/movable equipment, compressed gas cylinders, treated lumber, empty drums and flex hoses.

It is the policy of NASA and this Center to recycle and/or reuse materials when it is safe and cost-effective to do so. The NASA NPG 8820.3 identifies preferred approaches to pollution in the following priority order:

- Eliminate or reduce pollution at its source
- **Recycle to the maximum extent possible and in an environmentally safe manner**
- Treat pollution which cannot be eliminated at its source or recycled
- Properly dispose of whatever cannot be eliminated at its source, recycled, or treated

The organizations (NASA and/or contractor) responsible for environmental contamination at the RRMF which occurs as a result of failure to follow this policy, will be held liable for all clean up and/or remediation costs associated with such contamination.

The keys to recycling materials using good environmental management practices at salvage/reclamation operations are preventing spills/releases; and properly identifying, describing, and documenting materials before they are transferred to the RRMF.

The RRMF will accept materials only if they meet the following criteria:

- No leakage of any type of fluid from equipment or containers
- No visible indication of old spills/releases on outside of equipment or containers that could be washed off from rainfall
- All equipment being offered for sale as scrap must be, in addition to being free of leaks and external contamination, drained of all fluids.
- All items must be accompanied by required documentation, KSC Form 7-49 (or equivalent), and identified with a full, written commercial description

The RRMF will not accept treated lumber (arsenic, chromated copper arsenate, etc.), explosive materials/ordnance, blast media, hazardous materials (PCBs, asbestos, etc.), leaking equipment, radioactive wastes, uncrushed drums, intact compressed gas cylinders, intact flex hoses, or biomedical wastes. Any equipment which is found to be leaking during the initial inspection of the delivery to RRMF will be reported as a spill. It is the financial and environmental responsibility of the organization sending the equipment to the RRMF to ensure appropriate clean-up and disposition of the equipment and any other contamination caused by it.

Liquid-containing items which are delivered to the RRMF with the intent of resale but which are at some point redesignated for sale as scrap metal, will be properly drained (into impermeable containment sufficient to collect and contain 100% of all liquids in the equipment) by RRMF personnel and thereafter be managed under the requirements for scrap metal.

Once material has been accepted by the RRMF personnel it is their responsibility to ensure that the material is stored in a manner that prevents environmental contamination. It is also the responsibility of RRMF personnel to

remove detachable labels and/or signage indicating that the material is NASA property, before offering the material for sale, salvage, or reclamation purposes.

A table summarizing requirements for some of the most common materials sent to the RRMF is attached. This table summarizes only the major environmental requirements for delivery/acceptance of materials to the RRMF as well as general storage requirements of the materials while at the RRMF. The information in this table is for summary purposes only and should not be construed as a comprehensive listing of additional and/or non-environmental requirements that may exist.

In order to successfully implement this Policy, the Center must develop and implement adequate procedures addressing inspection, transportation, and storage activities at the RRMF and other Center organizations to prevent environmental contamination. It is the responsibility of the organization transferring items to the RRMF for reclamation, salvage, and/or resale to ensure that all materials sent to the RRMF meet the minimum requirements of this Policy at the time of delivery to RRMF.

This Policy becomes fully effective June 20, 2004.

Diane K. Callier
Chief, Environmental Program Branch, TA-C3

Date

Attachment

MATERIALS ACCEPTANCE CHART

Materials/Items	Requirements for Acceptance at RRMF (or originating organization's responsibility)	Storage Requirements at RRMF (RRMF responsibility)	Relevant NASA Environmental Guidance
Oil-filled equipment	<ul style="list-style-type: none"> *Drained of free-flowing liquids *Exterior visually free of oil or other contamination *Items which previously contained dielectric fluid must be accompanied by a copy of analytical results taken within the past 6 mos. Documenting that the fluid did not contain PCBs =< 50 ppm *KSC Form 7-49 or equivalent 	*Store drained items on impervious surface with rain protection to prevent leakage/runoff to soil	TA-C3 is developing Policy guidance for this; in the interim Denise DeLaPascua's e-mail guidance of 3/2/04 provides direction
Batteries: Lead-acid and Silver-Zinc	<ul style="list-style-type: none"> *Undrained, not leaking *Adequately secured to pallets or containerized, and protected against short circuits *Accompanied by MSDS *Identified as either as Lead-acid or Silver-Zinc *KSC Form 7-49 or equivalent 	<ul style="list-style-type: none"> *Batteries on pallets will not be stacked in any way that puts weight on battery terminals *Store batteries in segregated location inside shelter on impervious surface with rain protection 	KHB 8800.7
Drums	<ul style="list-style-type: none"> *Emptied of all free-flowing liquid *Crushed and palletized by JBOSC *KSC Form 7-49 or equivalent 	*Store palletized, crushed drums on impervious surface, protect from rainfall until delivered to recycler	*Process Waste Questionnaire/ Technical Response Package (PWQ/TRP) – KHB 8800.7
Equipment Containing Ozone-Depleting Substances (ODS, e.g. Freon) unusable	<ul style="list-style-type: none"> *Properly drained (recover ODS) *Labeled "Empty" *KSC Form 7-49 or equivalent 	*Once drained, there are no special storage requirements	
Equipment Containing Ozone-Depleting Substances for sale as usable equipment	<ul style="list-style-type: none"> *Do not drain *Certification that equipment is not leaking * KSC Form 7-49 or equivalent 	*Protect from rainfall	
Scrap Metal/Structural Steel	<ul style="list-style-type: none"> *Visibly clean of all residual oils/contaminants *Clearly identified in writing as intended for sale as scrap only 	*Segregate from items which have the potential to be sold for reuse	

	*KSC Form 7-49 or equivalent		
Flex Hoses	*Decontaminated and certified as such *Mechanically rendered unusable (by cutting, crushing, or other means) for anything but scrap *KSC Form 7-49 or equivalent	*Store with other scrap metal	Mike Cardinale, TA-C2 will be POC for follow-on actions to develop detailed procedures
Compressed Gas Cylinders (non-acetylene)	*Return empty cylinders to vendors, if possible *If impossible to return to vendors, ensure cylinders are empty & mechanically rendered useless for anything but scrap *KSC Form 7-49 or equivalent	*Store with other scrap metal	
Acetylene Gas Cylinders	*Return empty cylinders to vendors, if possible *Acetylene cylinders may contain asbestos so coordinate with CHS Environmental Health before cutting or disturbing structural integrity of acetylene cylinders	* Only store at RRMF under special circumstances and only according to guidance from CHS Environmental Health	*OMI Q3108 Rev. D 3/13/03 Compressed Gas Cylinders Handling and Use at KSC and CCAFS *LSV-P-5121 Management of Government/Vendor Owned Cylinders.
Magnetic Tapes	*KSC Form 7-49 or equivalent	*Protect from rainfall	
E-Waste (a generic term for a variety of waste containing electronic components including products used for data processing, telecommunications or entertainment such as computers, monitors, TV sets, mobile/cell phones, PDAs, and electronic equipment used in industrial settings) This does not include PCs & other equipment held for sale as usable	*Any hazardous materials must be removed – e.g. mercury, PCBs, etc. – and certified as such *KSC Form 7-49 or equivalent	*Protect from rainfall	
Precious Metals	*KSC Form 7-49 or equivalent	*Protect from rainfall	USA Property Custodian Guide, USA000430 PWQ/TRP – KHB 8800.7

Heavy/Movable Equipment (e.g. forklifts, lawn mowers, etc.) unusable	<ul style="list-style-type: none"> *Drained of all fluids (fuel, hydraulic oil, etc.) *Exterior visibly clean of all oil/contaminants *Identified as intended for sale as scrap *KSC Form 7-49 or equivalent 	*Store on impervious surface with rain protection	
Heavy/Movable Equipment for sale as usable equipment	<ul style="list-style-type: none"> *Inspect all fluid lines & reservoirs and certify as intact and not leaking *Exterior visibly clean of all oil/contaminants *KSC Form 7-49 or equivalent 	<ul style="list-style-type: none"> *Store on impervious surface with rainfall protection *Segregate from scrap metal *Conduct routine inspections for leaks, promptly clean up any contamination from leaks, and store equipment in secondary containment until leak is fixed 	

4/20/04

RRMF Will NOT Accept These Materials for Salvage/Reclamation	Relevant Guidance Documents for Disposal
Visibly Leaking Equipment/Containers	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Blast Media	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Uncrushed Drums	JBOSC Interim Guidelines for Disposition of Empty Drums
Treated Lumber	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Explosives/Ordnance	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Radioactive Materials	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Intact Compressed Gas Cylinders	
Intact Flex Hoses	
Hazardous Materials	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Biomedical Wastes	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6
Non-Lead & Non-Silver Zinc Batteries such as: <ul style="list-style-type: none"> • Lithium Batteries (managed as Universal Waste) • Mercury Batteries (managed as Universal Waste) • Nickel-Cadmium West Cell Batteries Containing Potassium Hydroxide Electrolyte Solution (managed as Universal Waste) • Nickel-Cadmium Dry Cell Batteries (managed as Universal Waste) 	Process Waste Questionnaire/Technical Response Package (PWQ/TRP) – KHB 8800.7 KHB 8800.6